

Work Order ID 73769 - 1

Thursday, September 15, 2011 8:55:42 AM



Page 1

Item ID: D6101-003

Accept



Setup Start



Revision ID:

Stop



Item Name: Saddle Billet, 7075

Start Date: 9/15/2011 Start Qty: 60.00



Cust Item ID:

Required Date: 9/30/2011 Req'd Qty: 60.00



Customer:

Reference:

Approvals:

Process Plan: *W*

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D6101

Rev B

100

0.00



PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: *14899*

- a) Description: Aluminum billet
- b) 7.875" x 6.250" x 2.00" thick
- c) Tolerance on all dimensions are +0.030"/-0.000"
- d) Grain direction along 7.875" length
- e) Material: 7075-T7351 (QQ-A-250/12)
- f) Material certification required

11-09-15
60

110

Receive & Inspect for Damage & Mat'l Certs

0.00



Packaging

Memo

0.00

Packaging

Ensure material certification is attached

Rec'd 9/15 *60*

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Work Order ID 73769

Thursday, September 15, 2011 8:55:42 AM



Page 2

Item ID: D6101-003

Accept



Setup Start



Revision ID:

Stop



Item Name: Saddle Billet, 7075

Start Date: 9/15/2011 Start Qty: 60.00



Cust Item ID:

Required Date: 9/30/2011 Req'd Qty: 60.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

QC6- Inspect dimensions to drawing

0.00



QC

Memo

0.00

Quality Control

Ensure Material certification comply to Dwg D6101

SL 11-09-19

20

130

Identify as per dwg & Stock Location: MAT 44

0.00



Packaging

Memo

0.00

Packaging

SL 11-09-19

140

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

nk/1908

MF
11-09-19

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|--------------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

Thursday, September 15, 2011 8:55:40 AM

Page 1

Work Order ID: 73769

Parent Item: D6101-003

Parent Item Name: Saddle Billet, 7075





Start Date: 9/15/2011

Required Date: 9/30/2011

Start Qty: 60.00

Required Qty: 60.00

Comments: IPP A: ☐01.05.04 ☐New Issue ☐EC

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|--|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|--|--------------|---------------|----------------|--------|
| D6101-003P  7075-T7351 2X6.25X7.875 | | Purchased | No | | | 110 | Each | 0.0000 | 1  | 60 | | 9/19/11 (20) | |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

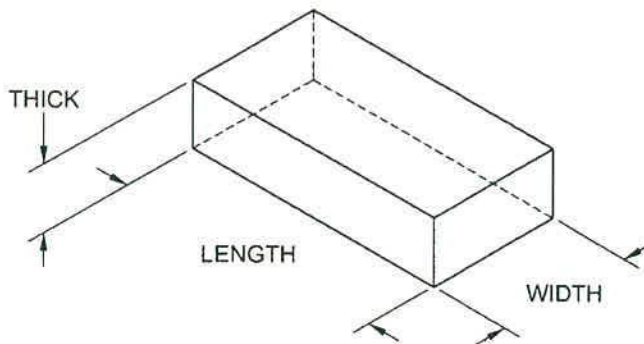
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

SPECIFICATION CONTROL DRAWING



PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

B ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

| Part No. | Alloy | Length | Width | Thick | Grain Direction |
|-----------|--------------------------|--------|-------|-------|--------------------|
| D6101-001 | 7075-T7351 (QQ-A-250/12) | 6.000 | 6.250 | 2.000 | Along 6.000 Length |
| D6101-003 | 7075-T7351 (QQ-A-250/12) | 7.875 | 6.250 | 2.000 | Along 7.875 Length |
| D6101-005 | 7075-T7351 (QQ-A-250/12) | 5.000 | 8.250 | 2.500 | Along 5.000 Length |
| D6101-007 | 7075-T7351 (QQ-A-250/12) | 7.750 | 8.250 | 2.500 | Along 7.750 Length |
| D6101-009 | 7075-T7351 (QQ-A-250/12) | 8.700 | 8.250 | 2.500 | Along 8.700 Length |
| D6101-011 | 7075-T7351 (QQ-A-250/12) | 9.700 | 8.250 | 2.500 | Along 9.700 Length |
| D6101-013 | 7075-T7351 (QQ-A-250/12) | 10.100 | 8.250 | 2.500 | Along 10.10 Length |
| D6101-015 | 7075-T7351 (QQ-A-250/12) | 9.450 | 6.250 | 2.500 | Along 9.450 Length |
| D6101-017 | 7075-T7351 (QQ-A-250/12) | 6.350 | 6.250 | 2.250 | Along 6.350 Length |
| | | | | | |
| | | | | | |

RELEASED
09/07/15/WB

WLO 73769

| | | | |
|------------|-------------------------------------|--|--------------|
| B | ADDED D6101-015/-017, ADD ASTM B209 | RF | 09.04.23 |
| A | NEW ISSUE | CP | 01.03.30 |
| REV. | DESCRIPTION | BY | DATE |
| DESIGN | CP | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| DRAWN | RF | | |
| CHECKED | <i>[Signature]</i> | DRAWING NO. | REV. B |
| MFG. APPR. | <i>[Signature]</i> | D6101 | SHEET 1 OF 1 |
| APPROVED | <i>[Signature]</i> | TITLE | SCALE |
| DE APPR. | <i>[Signature]</i> | SADDLE BILLET, 7075 | NTS |
| DATE | 09.04.23 | <small>COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small> | |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP

Page 1 of 1

Shipment No:982684

| | | | | | | | |
|--|-------------------------|--|--|---|--|--|--|
| Ship From: A. M. Castle & Co. (Canada) Inc. MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2 | | Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA | | Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN | | Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA | |
| Date Shipped 16-SEP-2011 | F.O.B. ORIGIN | Freight Terms Prepaid | | Carrier MANITOULIN | | BOL No 982684-2 | |

| | |
|-------------------------|---------------------------------------|
| Shipment Details | Final Destination Branch - MON |
|-------------------------|---------------------------------------|

| | | | | | | | |
|---|---------------------|--|--|---------------------------------|-------------------|------------------------------|-----------------------------------|
| Order No 1606245 | Line No 1 | Item No 752237.MO | Description 2.0000.PL.7075.T7351.ALUMINUM.USI.48.5000.144.5000 CUT 2SIDED TO 6.25 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 7.875")) X 7.875 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 7.875")) - ALUMINUM PLATE SAW SPECIFICATIONS: QQ-A-250/12 | | | | |
| Purchase Order No PER RELEASE | | Part Number YOUR ITEM NUMBER: D6101-003 | | Ordered Qty 20.00 PCS | | Invoice Qty 20 PCS | |
| Details | | DO NOT SHIP - HOLD FOR RELEASE | | | | | |
| Delivery No. 88620343 | Mill | Heat Number 589281 | Mech Id | PCS 20 | Width (IN) | Length (IN) | Shipped Qty(LBS) 203.22 |

| | |
|---|------------------|
| These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited. | |
| We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit. | |
| Reviewed by Authorized Castle Metals Representative: | Date: Name: |

CERTIFIED INSPECTION REPORT

Alcoa Inc.

PITTSBURGH, PA DAVENPORT WORKS

We hereby certify that the material covered by this certificate has been inspected and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

Per

Malcolm Murphy

Malcolm Murphy

Director of Manufacturing Davenport Works

Kenton P. Young

Kenton P. Young

Quality Assurance Manager

| | | | | | |
|----------------------------|---------------|---------------|--------------|------|------------|
| 1061390 | 0 | | | | |
| Ship Date | B.L. No. | Invoice No. | Alcoa No. | Item | Page |
| 2009-10-26 | 4323476 | 00000 | 1000138855-3 | | DS-38855-3 |
| P.O. No./Govt Contract No. | Customer | Alcoa Item | | | |
| 14585 Ln# 3 | CASTLE METALS | G041003428R14 | | | |

Ship To: A M CASTLE & COMPANY
3050 SOUTH HYDRAULIC
WICHITA 67216 KS

Item Description

2.0 IN TH (+.055 - .055) X 48.5 IN W (+.3125 - 0.000) X 144.5 IN LN (+.5 - 0.0) CAT D 164164 (N) A/T 7075-T7351 RECTANGLE MILL FINISH. USI 3MM DEAD ZONE REQ'D BOTH SIDES, SAWED IAC 6857. EXC_MRK AS97075-60 REV 25 AMS-QQ-A-250/12 IS 2007 AMS-STD-2154 EXC_MRK AMS4078 REV G EXC_MRK ASTM209 REV 07 ASTM591 REV 06 BSS7055 REV A EXC_MRK NMS159 REV N FS21211 REV K ((MARKED)) KRAFT PAPER INTERLEAVED MAX GROSS SKID WGT 4500 LB QUAN TOL +/- 40 % USI CL A 3 MM CQR 0107687 REV 32 CUST REQ 09-10-35 *** W/E 09-10-31 ***

| Num | Package Ticket | Lot | Weight | Quantity | UOM | Inspector Clock Numbers |
|-----|----------------|--------|--------|----------|-----|-------------------------|
| 1 | 759932 | 589281 | 1433 | 1 | PC | 47091 |
| 2 | 759995 | 589281 | 1433 | - | PC | 47091 |
| | | | 2356 | 2 | | |

Notes for CQR: 0107687.32

PRODUCT PRODUCED TO THE REQUIREMENTS OF MIL-STD-2154 ALSO MEET THE REQUIREMENTS OF AMS-STD-2154 PRODUCT PRODUCED TO THE REQUIREMENTS OF AMS-STD-2154 ALSO MEET THE REQUIREMENTS OF MIL-STD-2154. THIS MATERIAL HAS BEEN ULTRASONICALLY INSPECTED FULLY IMMERSION - TYPE I. THIS MATERIAL HAS BEEN ULTRASONICALLY INSPECTED FULLY IMMERSION - TYPE I. PRODUCT PRODUCED AND MARKED TO THE REQUIREMENTS OF AMS-QQ-A-250/12 ALSO MEETS THE REQUIREMENTS OF QQ-A-250/12F. PRODUCT PRODUCED AND MARKED TO THE REQUIREMENTS OF QQ-A-250/12 F ALSO MEETS THE REQUIREMENTS OF AMS-QQ-A-250/12. Exception to Spec AS97075-60 : Revsn: 25 Issue: Letter dated 2008-12-11 from TUCKER, BONNIE to PLATTER, B.

CQR: 0107687.32 -Specification Limits

| Temp | Dir | UTS | UTS | EL40 |
|----------------------|-------------------------|------|------|------|
| | | KSI | KSI | PCT |
| T7351 | Long Transv. | Max | 68.9 | |
| | | Min | 57.0 | 5 |
| T7351 | Elec. Cond. (ECT) & MIN | 38.0 | PCT | |
| Chemical Composition | | SI | FE | CU |
| | | 0.40 | 0.50 | 2.0 |
| Alloy | 7075 | Min | | 1.2 |

Other Other
Each Total Aluminum
0.25 0.15
REMAIN

CERTIFIED INSPECTION REPORT

Alcoa Inc.

PITTSBURGH, PA DAVENPORT WORKS

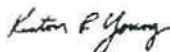
Ship From: RIVERDALE, IA.

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet, the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

For



Malcolm Murphy
Director of Manufacturing Davenport Works



Kenton P. Young
Quality Assurance Manager

| | | | | |
|----------------------------|---------------|---------------|--------------|------------|
| 1061390 | 0 | | | |
| Ship Date | B.L. No. | Invoice No. | Alcoa No. | Item |
| 2009-10-26 | 4323476 | 00000 | 1000138855-3 | DS-38855-3 |
| P.O. No./Govt Contract No. | Customer | Alcoa Item | | |
| 14685 Ln#: 3 | CASTLE METALS | G041003428R14 | | |

CQR: 0107687.32 -Specification Limits (cont.) -----
 Lot: 589281 - Mechanical, Physical, Metallography, Quantometer Results -----

| Temp | Dir | No-> | UTS | TYS | EL4D |
|-------|--------------|------|------|------|------|
| T7351 | Long Transv. | 3 | KSI | KSI | PCT |
| | | | 72 | 61.3 | 10.8 |
| | | | 71.9 | 61.3 | 11.1 |
| | | | 71.6 | 61 | 11 |

T7351 Elect Cond tIACS 40.8 40.9 41.0 PCT

| Cast Number | Chemical - CES | SI | FE | CU | MN | MG | CR | ZN | TI |
|-------------|----------------|------|------|-----|------|-----|------|-----|------|
| H458024 | Actuals | 0.06 | 0.30 | 1.6 | 0.02 | 2.4 | 0.19 | 5.7 | 0.02 |

This material was melted in the United States or a Qualifying Country [REF DFARS 225.972.1(a)], it was manufactured in the United States